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VON BAER ON ANTHROPOLOGICAL EXPLORATIONS.*

THERE is no scientific expedition, which could be undertaken within the Russian empire, which would be received with greater favour by Europe at large, and would have as many claims on the gratitude of our own country, than an expedition having for its main object the study and, if possible, the geographical determination of the traces of the earliest immigrations of peoples, and their different degrees of civilisation, and how far these have still been preserved on the Russian soil. It is not intended to search for fresh written documents, either for comparison or for the enrichment of authenticated historical records. For this object, much has already been effected under the reign of the late Emperor Nicholas; and researches in this direction are still being continued. The prehistoric times of the human species, for which there exist no other documents than the relics of man himself preserved in the soil, his implements and industrial products, will form the subjects for inquiry. Many highly instructive discoveries have, as regards primitive times, recently been made in various parts of Western Europe. Thus, to mention only a few of the more important results obtained, there have been found in Switzerland, and recently also in other countries, vestiges of human habitations in the mud of lakes, containing relics of three different kinds of cereals, of domestic animals (cattle, swine, sheep, dogs), of many species of wild animals (game), also webs, and implements made of stone or bones. In Western Switzerland, there have been found in the lakes various bronze objects, which are not met with in the eastern cantons, and thus indicate a more recent state of civilisation. In Denmark are found large heaps of oyster and other shells, which lie scattered on the coast, and which for a long time were considered as having been thrown ashore by the sea. These heaps are found to contain stone implements, but none made of metal; bones of wild animals artificially split open by the hand of man, but no bones of domestic animals excepting those of the dog. In short, there were found in these shell-mounds, some being of considerable dimensions, the refuse of meals; hence they were called kitchen-refuse. We here perceive the traces of an early uncivilised condition of man, in which he knew not the use of metals,

* "Proposal for the Equipment of Anthropological Expeditions into the Interior of the Russian Empire", by K. E. von Baer. Translated from the *Bulletin de l'Académie Impériale des Sciences de St. Pétersbourg*, tom. vii, 1865.

possessed no domestic animals, excepting perhaps the dog, and supported himself by the chase or by fishing. Neither textures nor the remains of habitations belonging to this primitive period have as yet been found. In some districts of France, and lately also in England, there have been found, in beds not belonging to recent formations—namely, in the diluvium of geologists—quartz and flint implements, apparently rudely shaped by the hand of man. No remains of human bones were found, nor any finished art objects.* The assumption is, that these flints have been worked by the hand of man, as such forms are not produced by nature, but that the period of their fabrication is so remote, that even the hardest parts of the human body have been utterly destroyed by time. There were further found in several regions, in caves subsequently closed by geological processes, so that they were inaccessible to atmospheric air, human bones associated with those of antediluvian animals, such as the mammoth and similar gigantic animals, previously thought to have been extinct before the appearance of man.

Thus, in short, the history of the human species has been extended. It is now acknowledged that, even in such parts of Europe now considered the most civilised, man was for a long period in as low a state of culture as were the inhabitants of Australia, New Guinea, the interior of North and South America, when first discovered by Europeans. Nevertheless, such sparse discoveries, separated in time and space, are as yet insufficient to form a basis for a general history of European humanity before the introduction of the art of writing. It is above all things desirable to ascertain what contributions to the history of prehistoric times Russia may afford. The celebrated antiquary Worsaae, who has taken so large a share in the researches concerning the prehistoric times of Denmark, had already some years ago determined to visit Russia for this express purpose, but was prevented by accepting an honourable appointment in his own country.

In order better to indicate what may be expected from the Russian empire, we must be permitted to extract a few passages from the advertisement of the Academy, prefatory to the Russian translation of Worsaae's work on northern antiquities.

“Accidental discoveries have only yielded individual, not connected indications. A more connected insight into the primitive condition of the European peoples, was only obtained when many finds from prehistoric times, in different places, were compared, and when not merely the objects were preserved, but all conditions under which they were found were closely examined and described. By doing so,

* (Note in original.) This applies only to 1862; for in 1863 were found in these beds some teeth, and the half of a human lower jaw.

we were enabled to distinguish the different kinds of sepulchres, and to recognise that they must have belonged to different peoples, who have succeeded each other; for the form of the crania varies much. Then only could the following questions be raised: By what means have the inhabitants of Europe, and especially of the north, supported themselves? At what periods have they lived solely on the products of nature, and when did they carry on agriculture and cattle-breeding? Which peoples introduced the art of fusing metals, and who brought with them the art of working iron? It is easily conceivable, that replies to these questions can only be gradually forthcoming, as we can only question dumb witnesses, and that these can only give fragmentary answers, inasmuch as every thing not of the most solid material has been destroyed by time.

"In Denmark and Sweden, and also in Mecklenburg, such researches have zealously been carried on. In Copenhagen a large museum of northern antiquities has been formed, under the able direction of Thomsen. In traversing the numerous apartments, where everything is preserved relating to the earliest culture, down to the art-products of the middle ages, we see, as it were, passing before us the history of these parts. Both in Denmark and in Sweden, the conviction has gained ground that the prehistoric time of these countries must be divided into three chief periods—the stone-, the bronze-, and the iron-age. In the first period were employed only implements of stone and bones, or wood fastened with bast or leather thongs. In the second period appear the more easily workable metals, specially gold, which was, however, always rare and costly, and copper alloyed with other metals—with tin in Denmark, and in other parts with zinc; this alloy is called bronze. In the third period appears iron, converted, on account of its hardness, into weapons, knives, axes, and other objects, and which supplanted bronze. These periods, though assumed more than twenty-five years ago, are still recognised, notwithstanding that it is now shewn that these ages are not so sharply demarcated as was formerly believed; inasmuch as stone weapons were not immediately abandoned, on account of the rarity and costliness of iron implements. On the other hand, it has also been shewn that these three chief periods admit of subdivisions. Thus polished stone implements come much later in use than such as are rudely hewn, and made in the earliest period of flint."

"Whence the arts to work the various metals immigrated, and whence came the various cereals and domestic animals, is as yet undecided. The cautious Danes and Swedes are not inclined to ascribe this progress to the primitive inhabitants of their country, but to later immigrations. That this later civilisation proceeded from Asia, is rendered probable by linguistic researches, and is confirmed by the finds in sepulchres. But whence came the immigrations, can only be determined after the relics of the past have in other countries been as carefully examined as in the Scandinavian North. They have, however, now commenced to pursue such researches, especially in Great Britain, Switzerland, France, Italy, and Germany. Russia, where since Karamsin's time the historical records of our country have been

studied with so much zeal, has as yet taken little interest in the earliest period, which cannot be reached by written documents. Although many *kurgans* (graves) have been opened in the Russian empire, and many reports published on them, they have not been viewed from a common stand-point; nor do we possess a general collection of the discovered prehistoric objects. Such articles, moreover, unless they consist of precious metals, are frequently not considered worthy of being preserved, nor placed in a public collection, nor designated by names. And yet foreigners, who earnestly endeavour to throw some light on the earliest history of the human species, are most anxious to obtain information from Russia, because there must be found many roads by which the earliest civilisation had been introduced. It is clear that all immigrations from Asia to Europe, which did not proceed by way of the Grecian Archipelago or the Hellespont and the Dardanelles, which could only have been effected by boats, must have passed through most of the countries now forming the Russian empire. Thus, to mention only one instance, attention has long since been drawn to the circumstance that in the old so-called Tschudes-shafts and Tschudes-graves, metal objects belonging to an early period have been found. The connection of these facts with the introduction of metals into Western Europe, as well as the period to which the Tschudi tombs belong, can only be determined by comparing a series of discoveries of this kind. The following instance will show how instructive must be, for Western Europe, observations gathered in the extensive area of the Russian empire. In Celtic graves, there are frequently found bronze implements having the form of a little spade, about the use of which conflicting opinions were given. These questionable implements, called 'celts', occur also in the Tschudes-graves; but there they are not of cast bronze, but of copper. We now learn, from our zealous traveller Mr. Radde, that in the far west of Siberia an exactly similar implement is at present in use to dig up lily-bulbs."

"It is, therefore, a debt of honour which Russia, now belonging to the states where science is cultivated, is bound to pay, by a profound study of its antiquities. The interest in the past of Russia, though no longer merely national, but embracing humanity at large, will become more general when the results of the enterprises of other peoples in the same field will be better known, by which the classification and denomination of the objects found in our country will be facilitated."

Three years will probably suffice to enable ramified expeditions to collect valuable materials for forming an opinion on the early immigrations of peoples, and their degree of culture.

The members of such expeditions should be perfectly acquainted with the results obtained by the researches of Western Europe in relation to the prehistoric records of humanity. They should also carefully study all the reports relating to the opening of kurgans in Russia, and thus obtain hints for further researches; they should personally examine these kurgans, of which it is only known that they

are very ancient, and belong to different periods. They should also open such graves as greatly differ from each other. During the first journey, which we shall look upon as merely one of preliminary inspection, inquiries should be instituted as regards recent excavations, and existing collections which should be examined. At the same time, it should be inquired into whether on the shores of the lakes traces are found of human habitations, or other relics of human industry. Such explorations must be pushed to the extreme boundary of the so-called Tschudes-graves.

When this preliminary exploration shall have furnished us with some indications as to the proper directions and other points, then only will it be advisable to sketch out special plans for sending expeditions; one, for instance, to the flat country south of the Ural; a second to the depressions between these mountains near Jekatherinburg; and perhaps a third across the Crimea to Taman and the Ponto-Caspian steppes; for these three roads will probably prove to have been the three chief gates of immigration. In all directions must kurgans be opened, as well as flat graves, which are known to the people. The finds should be well preserved, and the condition of the graves should be minutely described and properly delineated. The subsequent comparison of these finds cannot fail to lead to certain results.

It is essentially requisite that such researches should be made soon, and according to a preconcerted plan; for in various parts of the country there are constantly kurgans and other graves opened, but without the requisite circumspection, and the publication of details, which are absolutely necessary for arriving at any satisfactory result.

These expeditions will also have opportunities for ethnographical observations relating to the present period, and may thus either rectify or furnish supplements to the recent works of Pauly.
